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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/530,233	04/26/2000	PHILIPPE SEGUELA	641050.90021	3952

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EXAMINER

PAK, MICHAEL D

ART UNIT

PAPER NUMBER

1646

DATE MAILED: 11/30/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/530,233

Applicant(s)

SEGUELA ET AL.

Examiner

Michael Pak

Art Unit

1646

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 August 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 16-21 and 38-40 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 16-21 is/are allowed.
- 6) ☒ Claim(s) 38-40 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 9 August 2004 has been entered.

Response to Amendment

2. Amendment filed 10 June 2004 has been entered. Claims 16-21 and 38-40 are pending.
3. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
4. Applicant's arguments filed 10 June 2004 have been fully considered but they are not found persuasive.

Claim Rejections - 35 USC § 112

Art Unit: 1646

5. Claims 38-39 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims recite or encompass the term "hybridizes at high stringency" which is ambiguous and the metes and bounds of the term is not clear. The term "high stringency" is a relative term whose metes and bounds are not clear because one skilled in the art use specific ionic and temperature conditions for hybridization.

6. Claims 38-40 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. This is a new matter rejection.

The claims recite "amelioride-sensitive" which is new matter because the subgeneric limitation is not disclosed in the specification.

The claim 39 recite "hybridizes at high stringency" which is new matter because the subgeneric limitation is not disclosed in the specification.

Priority

7. Applicant's claim for priority under 35 U.S.C. 119(a-d) is acknowledged. However, the foreign application upon which priority is claimed fails to provide adequate

Art Unit: 1646

support under 35 U.S.C. 112 for claims 38-40 of this application for the reasons provided above in the 35 USC 112 rejections. See MPEP 706.02.

Furthermore, the foreign priority does not disclose subgeneric limitation of claims 38-40 of the "85% identity" nor "hybridizes at high stringency" in conjunction with the specific functional limitations including the "amelioride sensitive" limitations.

Claim Rejections - 35 USC § 102

8. Claims 38-40 are rejected under 35 U.S.C. 102(b) as being anticipated by Waldman et al. (J. Biol. Chem., 1997).

Waldman et al. disclose the proton gated sodium channel from sensory neurons (figures 1 and 3) which has 85.6% amino acid sequence identity with SEQ ID NO: 2. The channels of Waldman et al. inherently have the P2X2 ATP channel activity. The channels of Waldman et al. inherently belong to the degenerin family. The specification on page 4 teach that the channel of Waldman et al. are amelioride sensitive.

9. Claims 38-40 are rejected under 35 U.S.C. 102(e) as being anticipated by DeWeille et al. (US 6,287,859).

DeWeille et al. disclose the proton gated cation channel from sensory neurons (SEQ ID NO: 14) which has 99.4% amino acid sequence identity with SEQ ID NO: 2. The channels of DeWeille et al. inherently have the P2X2 ATP channel activity as well as the functional activity including amelioride sensitivity. The channels of DeWeille et al. inherently belong to the degenerin family.

Art Unit: 1646

10. Claims 38-40 are rejected under 35 U.S.C. 102(b) as being anticipated by Lewis et al. (Nature, 1995).

Lewis et al. disclose the proton gated cation channel P2X2 ATP gated from sensory neurons (figure 2). The channels of Lewis et al. inherently have the P2X2 ATP channel activity with heteromultimer because the sensory neurons comprise all the subunits. The channels of Lewis et al. inherently belong to the degenerin family. The specification on page 4 teach that the channel of Waldman et al. are amelioride sensitive which means that both types of proton gated channels are amelioride sensitive.

11. Claims 38-40 are rejected under 35 U.S.C. 102(e) as being anticipated by Renard et al. (US 2002/0173000).

Renard et al. disclose the proton gated cation channel from sensory neurons (SEQ ID NO: 6) which has 94.9% amino acid sequence identity with SEQ ID NO: 2. The channels of Renard et al. inherently have the P2X2 ATP channel activity as well as the functional activity including amelioride sensitivity. The channels of Renard et al. inherently belong to the degenerin family.

12. Claims 16-21 are allowed.

Art Unit: 1646

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael Pak whose telephone number is 571-272-0879.

The examiner can normally be reached on 8:30 am - 2:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Brenda Brumback can be reached on 571-272-0961. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9306 for regular communications and (703) 872-9306 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 571-272-0507.

Michael D. Pak

Michael Pak
Primary Examiner
Art Unit 1646
November 29, 2004